PATREC

Increasing older people's acceptance of shared, automated, and electric vehicles

EXECUTIVE SUMMARY

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Project steering committee

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About PATREC

The Planning and Transport Research Centre (PATREC) is a collaboration between the Government of Western Australia and local universities, constituted to conduct collaborative, applied research and teaching in support of policy in the connected spaces of transport and land use planning. The collaborating parties are: The University of Western Australia, Curtin University, Edith Cowan University, Department of Transport, Main Roads Western Australia, Western Australian Planning Commission and the Western Australian Local Government Association.

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Executive Summary

The advent of Autonomous Vehicles (AVs) is expected to provide numerous benefits to society, including increased mobility for people who are unable to operate or do not have access to conventional cars. The wellbeing of older adults is connected to their mobility. In Australia, older adults are heavily reliant on conventional cars to fulfil their transportation needs. However, age-related physical and cognitive declines can make it difficult for some older adults to operate a car safely, and their risk of injury in the event of a collision is significantly higher than for the general population. AVs could provide a safer means of transport for older adults that is not dependent on their ability to operate a conventional car.

Research has shown that older adults tend to be more reserved about using AVs than the general population, despite being a group that may particularly benefit from the introduction of this technology. Initiatives designed to increase the acceptance of AVs among older adults may foster uptake among this group when AVs become widely available. This research project examined whether exposing older adults to AVs increased their acceptance and usage intentions.

Older adults from retirement complexes adjacent to Curtin University (Bentley, Western Australia) were invited to attend two AV exhibitions. The first exhibition involved residents from SwanCare being invited to view a Shared Autonomous Electric Vehicle (SAEV) at their retirement complex, and the second involved older adults from both SwanCare and Rowethorpe riding an SAEV operating in autonomous mode at the Curtin University campus. Several quantitative and qualitative data collection activities were conducted before and during the exhibitions.

The results of the project suggest that exposing older adults to AVs could be an effective means of fostering positive attitudes to them, potentially resulting in increased likelihood of adoption. After riding the SAEV, the study participants generally felt more positively about AVs and they were more likely to see themselves using one in the future. The view was often expressed by the participants that apprehensive older adults would be more likely to use AVs once they had seen them operating safely in person. In addition, many participants noted that the physical layouts of AVs will need to suit the physical limitations of older adults while providing a safe, and comfortable space. They emphasised that the operating routes of AVs should be practical and accessible for older adults to maximise utilisation.

This research project was funded by Planning and Transport Research Centre (PATREC). The research team comprised Professor Simone Pettigrew (lead researcher), Dr Leon Booth, Professor Richard Norman, and Professor Tele Tan. The steering committee comprised Alizanne Cheetham (now Infrastructure WA), Peter Laing (Department of Transport), and Karl Shoebridge (Department of Transport).

The full technical report will be published once a related academic paper has been published or after two years.